We Claim:

1. A surface-mountable radiation-emitting component, comprising:

a leadframe and a radiation-emitting chip mounted on said leadframe;

a molding material encasing said leadframe and said radiation-emitting chip and having a shape defining a mounting surface of the component, said mounting surface extending at a first predetermined angle relative to a main emission direction of the component;

said leadframe having leadframe connections protruding out of said molding material and having connection surfaces enclosing a second predetermined angle with said mounting surface.

2. The component according to claim 1, wherein said leadframe connections, viewed from said mounting surface, are led laterally out of said molding material.

3. The component according to claim 1, wherein said first predetermined angle has a value of substantially 0° or lies within a range from 0° to 20°.

4. The component according to claim 1, wherein said second predetermined angle has a value of substantially 90° or lies within a from 70° to 90°.

5. The component according to claim 1, wherein said first predetermined angle has a value of substantially 90° or lies within a range from 70° to 90°.

6. The component according to claim 1, wherein said second predetermined angle has a value of substantially 0° or lies within a range from 0° to 20°.

7. The component according to claim 1, wherein said leadframe connections extend up to a mounting plane defined by said mounting surface.

8. The component according to claim 1, wherein said leadframe connections extend into a vicinity of a mounting plane defined by said mounting surface.

9. The component according to claim 1, wherein said leadframe is substantially flat.

10. The component according to claim 1, wherein said leadframe is formed with voids selected from the group consisting of

passages and lateral recesses within a region surrounded by said molding material.

11. The component according to claim 1, wherein said molding material has a top surface parallel to said mounting surface.

12. The component according to claim 1, wherein said molding material, viewed from said radiation-emitting chip, is formed with a curved surface in a main emission direction.

13. The component according to claim 11, wherein said curved surface is selected from the group consisting of a part-cylindrical surface, part-spherical surface and part-aspherical surface.

14. The component according to claim 1, wherein said radiation-emitting chip contains a compound selected from the group consisting of GaN, InGaN, AlGaN, InAlGaN, ZnS, ZnSe, CdZnS and CdZnSe.

15. The component according to claim 1, wherein said radiation-emitting chip is configured to emit radiation selected from the group consisting of visible light, infrared radiation, and ultraviolet electromagnetic radiation.

16. The component according to claim 1, wherein said molding material is a radiation-permeable plastics compression molding material.

17. The component according to claim 1, wherein said molding material is a resin-based material.

18. The component according to claim 1, which comprises conversion material distributed in said molding material.

19. The component according to claim 1, wherein said molding material consists essentially of a prereacted epoxy resin.

20. The component according to claim 19, wherein said epoxy resin is epoxy novolak or epoxy-cresol novolak.

21. The component according to claim 19, wherein said epoxy resin has been prereacted with at least one of a phenol curing agent and an anhydride curing agent.

22. The component according to claim 19, wherein said conversion material contains a material selected from the group consisting of an organic phosphor, an inorganic phosphor, and a mixture thereof.

23. The component according to claim 22, wherein said phosphor contains a phosphor metal center M in a host lattice based on the general formula $A_3B_5X_{12}$.

24. The component according to claim 22, wherein said phosphor contains a phosphor metal center M in a host lattice based on a sulfide, oxysulfide, borate, aluminate, or metal chelate complex.

25. The component according to claim 23, wherein said phosphor is selected from the group consisting of YAG:Ce, TAG:Ce, TbYAG:Ce, GdYAG:Ce, GdTbYAG:Ce, and mixtures thereof.

26. The component according to claim 1, wherein said molding material contains an adhesion promoter.

27. The component according to claim 26, wherein said adhesion promoter is 3-glycidyloxypropyltrimethoxysilane or further derivatives based on trialkoxysilane.

28. The component according to claim 18, wherein said molding material contains a surface modifier for modifying a surface of said conversion material.

29. The component according to claim 28, wherein said surface modifier is diethylene glycol monomethyl ether.

30. The component according to claim 1, wherein said molding material contains a mold release agent or a lubricant.

31. The component according to claim 30, wherein said mold release agent is a wax-based mold release agent or a metal soap with long-chain carboxylic acids.

32. The component according to claim 30, wherein said mold release agent is a stearate.

33. The component according to claim 1, wherein said molding material contains inorganic fillers for increasing a refractive index of said molding material.

34. The component according to claim 33, wherein said inorganic fillers are selected from the group consisting of TiO_2, ZrO_2, α-Al_2O_3, and other metal oxides.

35. The component according to claim 1, wherein said molding material contains glass particles.

36. The component according to claim 35, wherein said glass particles have a mean particle size of less than 100 μm.

37. The component according to claim 35, wherein said glass particles have a mean particle size of less than 50 μm.

38. The component according to claim 35, wherein a proportion of said glass particles in said molding material is between 0% by weight and 90% by weight.

39. The component according to claim 35, wherein a proportion of said glass particles in said molding material is between 10% by weight and 50% by weight.

40. The component according to claim 1, wherein said molding material is a mixture containing the following constituents:

a) plastics compression molding material ≥ 60%;

b) conversion material ≥ 0% and ≤ 40%;

c) adhesion promoter ≥ 0% and ≤ 3%;

d) mold release agent ≥ 0% and ≤ 2%;

e) surface modifier ≥ 0% and ≤ 5%;

f) antioxidant ≥ 0% and ≤ 5%;

g) UV light stabilizer ≥ 0% and ≤ 2%; and

h) glass particles ≥ 0% and ≤ 90%.

41. The component according to claim 40, wherein said conversion material is present in an amount of > 10% and ≤ 25% and said antioxidant is based on phosphite or on sterically hindered phenols.

42. The component according to claim 18 configured to produce radiation selected from the group consisting of mixed-color light, white light, infrared, and ultraviolet electromagnetic radiation.

43. A method of producing the component according to claim 1, which comprises the following steps:

preparing a molding material from a resin powder prereacted with curing agent, and optionally further fillers; and

encasing the leadframe and the radiation-emitting chip mounted thereon with the molding material to form the component according to claim 1.

44. A method for producing a surface-mountable, radiation-emitting component, the method which comprises the following steps:

mounting a radiation-emitting chip on a leadframe;

preparing a molding material from a resin powder prereacted with curing agent, and optionally added further fillers; and

encasing the leadframe and the radiation-emitting chip with the molding material.

45. The method according to claim 44, wherein the step of preparing the molding material comprises:

mixing a resin powder, prereacted with curing agent, with a conversion material and, optionally, further fillers; and

blending the mixture to provide a homogeneous powder mixture.

46. The method according to claim 45, wherein the molding material is a plastics compression molding material.

47. The method according to claim 44, which comprises encasing the radiation-emitting chip such that light exit sides of the chip are surrounded by the molding material.

48. The method according to claim 44, wherein the prereacted resin powder consists of epoxy novolak or epoxy-cresol novolak.

49. The method according to claim 48, which comprises utilizing epoxy resin prereacted with at least one of a phenol curing agent and an anhydride curing agent.

50. The method according to claim 44, wherein the conversion material is a luminescent pigment powder containing at least one inorganic phosphor having a phosphor metal center M in a host lattice based on the general formula $A_3B_5X_{12}$.

51. The method according to claim 50, wherein the phosphor is YAG:Ce, TAG:Ce, TbYAG:Ce, GdYAG:Ce, GdTbYAG:Ce or a mixture formed therefrom.

52. The method according to claim 44, wherein the conversion material is a luminescent pigment powder containing at a metal center M in a sulfide, oxysulfide, borate, aluminate or metal chelate complex.

53. The method according to claim 44, which comprises pre-drying the luminescent pigment powder before mixing with the resin powder.

54. The method according to claim 44, which comprises providing a resin initially in rod or tablet form, and milling the resin to provide the resin powder.

55. The method according to claim 44, which comprises providing a resin initially in rod or tablet form and milling the resin, prior to mixing with the conversion material, to provide the resin powder.

56. The method according to claim 44, which comprises mixing the resin powder or the resin and the conversion material, and optionally the further fillers, by first mixing the components coarsely and then milling the mixture in a mill to form a very fine, homogeneous powder.

57. The method according to claim 56, which comprises milling the mixture in a ball mill.

58. The method according to claim 44, which comprises milling the resin or the resin powder in a mill prior to mixing with the conversion material, and optional further fillers.

59. The method according to claim 58, which comprises milling the resin or the resin powder in a coffee grinder.

60. The method according to claim 44, which comprises mixing an adhesion promoter with the conversion material.

61. The method according to claim 44, which comprises mixing an adhesion promoter with the resin powder.

62. The method according to claim 61, which comprises mixing the adhesion promoter in liquid form with the conversion material.

63. The method according to claim 61, wherein the adhesion promoter is one of glycidyloxy-propyltrimethoxysilane and further derivatives based on trialkoxysilane.

64. The method according to claim 44, which comprises mixing a wetting agent with the conversion material, for improving a wettability of surfaces of the conversion material

65. The method according to claim 44, which comprises adding at least one monofunctional and polyfunctional polar agent which has carboxyl, carboxylic ester, ether and alcohol groups and improves the wettability of the surfaces of the conversion material for modifying surfaces of the conversion material.

66. The method according to claim 44, which comprises admixing a mold release agent or lubricant.

67. The method according to claim 66, which comprises admixing the mold release agent or lubricant with the resin powder or prior to mixing with the conversion material.

68. The method according to claim 66, wherein the mold release agent is a solid wax-based mold release agent or a metal soap with long-chain carboxylic acids.

69. The method according to claim 68, wherein the mold release agent is a stearate.

70. The method according to claim 44, which comprises admixing inorganic fillers for increasing a refractive index of the plastics compression molding material.

71. The method according to claim 70, which comprises admixing fillers comprising oxides selected from the group consisting of TiO_2, ZrO_2, $\alpha-Al_2O_3$, and other metal oxides.

72. The method according to claim 44, which comprises mixing glass particles with the molding material as filler.

73. The method according to claim 72, which comprises admixing glass particles having a mean particle size less than 100 μm.

74. The method according to claim 72, which comprises admixing glass particles having a mean particle size less than 50 μm.

75. The method according to claim 72, wherein a proportion of the glass particles in the molding material lies between 0% by weight and 90% by weight.

76. The method according to claim 72, wherein a proportion of the glass particles in the molding material lies between 10% by weight and 50% by weight.

77. The method according to claim 44, which comprises admixing an antioxidant.

78. The method according to claim 77, wherein the antioxidant is based on one of phosphite and sterically hindered phenols.

79. The method according to claim 44, which comprises admixing a UV light stabilizer.

80. The method according to claim 44, which comprises providing a molding material with the following constituents:

a) resin powder ≥ 60%

b) conversion material ≥ 0% and ≤ 40%

c) adhesion promoter ≥ 0% and ≤ 3%

d) mold release agent ≥ 0% and ≤ 2%

e) surface modifier ≥ 0% and ≤ 5%

f) antioxidant ≥ 0% and ≤ 5%

g) UV light stabilizer ≥ 0% and ≤ 2%

h) glass particles ≥ 0% and ≤ 80%.

81. The method according to claim 80, which comprises adjusting the conversion material in the molding material to > 10% and ≤ 25%.

82. The method according to claim 44, wherein the step of encasing the leadframe comprises injection molding or injection compression molding.

83. The method according to claim 82, which comprises mounting the radiation-emitting chip on a leadframe, introducing the radiation-emitting chip and a portion of the leadframe into an injection mold, liquefying the molding material, and injecting the molding material into the injection mold.

84. The method according to claim 82, which comprises preheating the leadframe prior to the encasing step.

85. The method according to claim 44, wherein the encasing step comprises encapsulating a plurality of leadframes, each having at least one radiation-emitting chip mounted thereon,

with a cohesive covering and subsequently dividing into individual components.

86. The method according to claim 85, wherein the dividing step comprises a process selected from the group consisting of breaking, sawing, laser cracking, or water jet sawing.